DAE Technologies for Environment

Presentation for GreenCo forum

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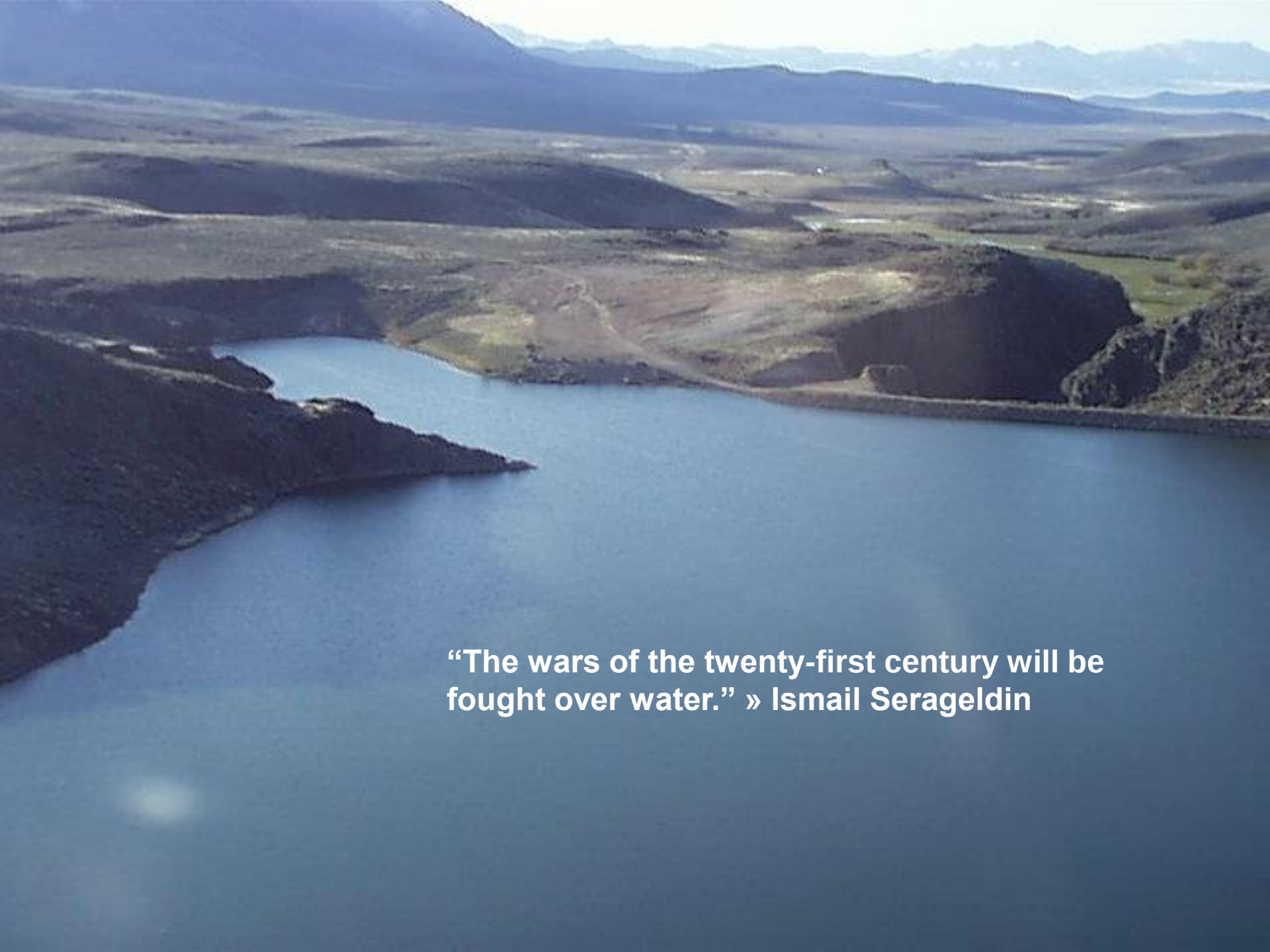
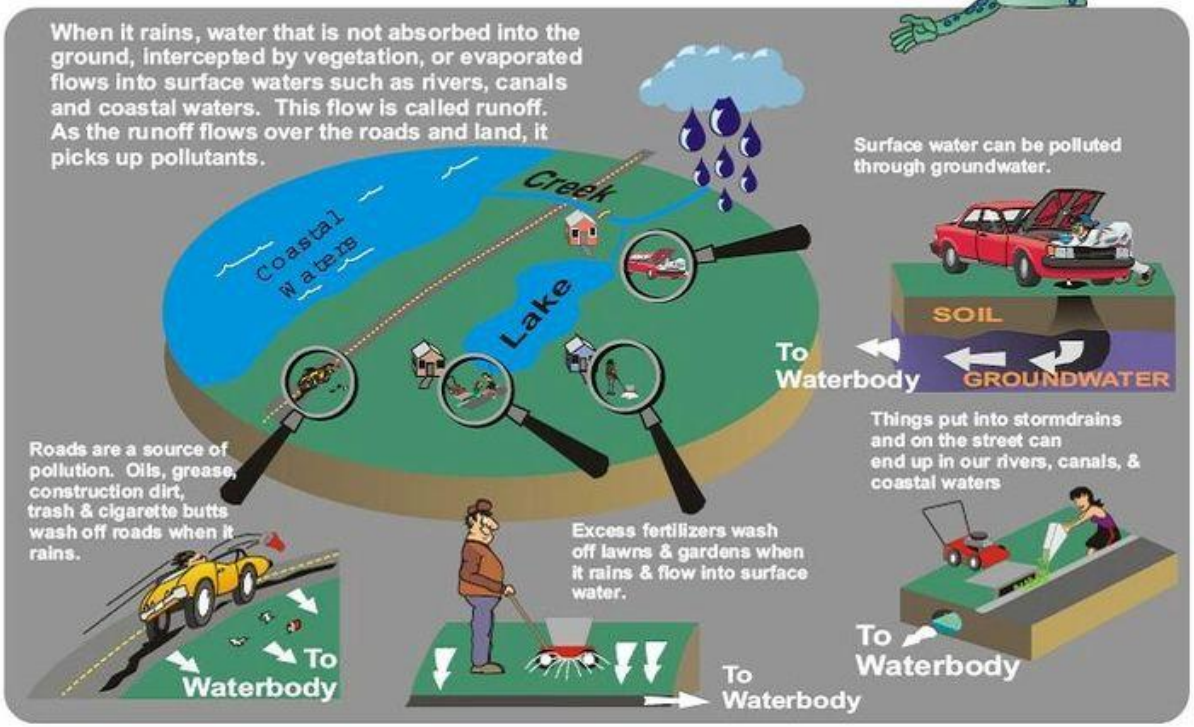
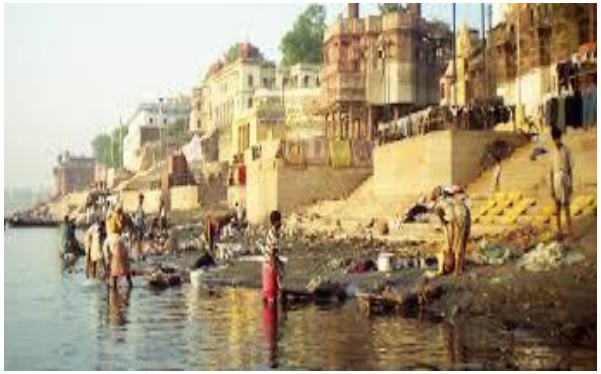
DAE


“The wars of the twenty-first century will be fought over water.” » Ismail Serageldin

“All the water that will ever be is, right now.” » National Geographic

Sources of Surface Water Pollution





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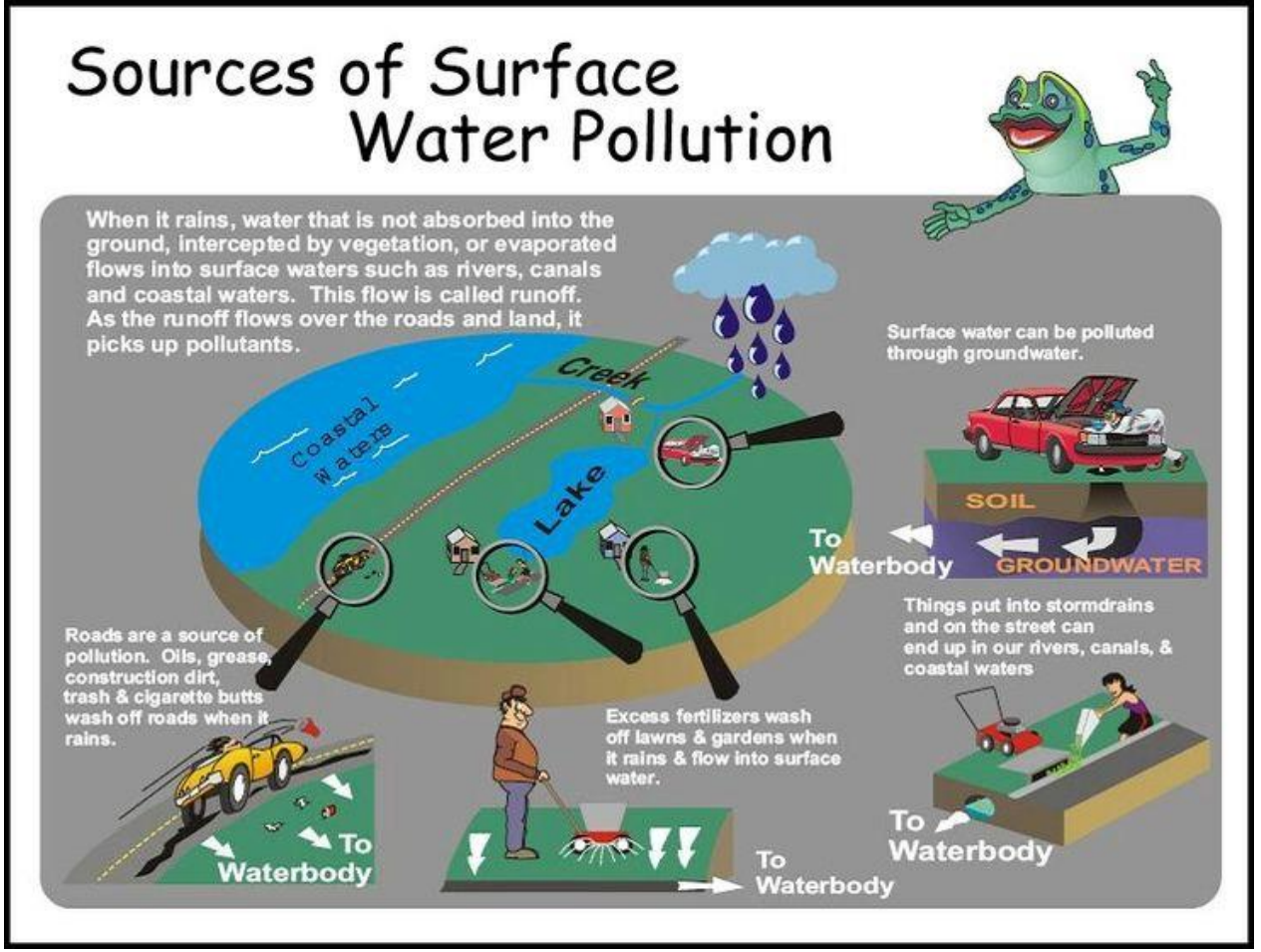
DAE Advantage!

- Years of sustained efforts of the best scientists and engineers from every discipline of science & technology working together has yielded the solution!.



Degradable plastic film/ NISARGRUNA

membrane based filters/ Rapid biocomposting of dry leaves

Emulsion removal/ Sludge treatment

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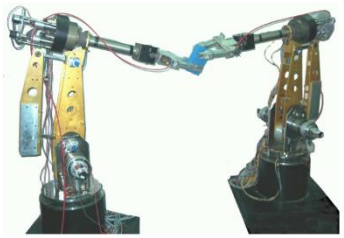
DAE- A fountain of know-how

Robots



Scholarships/ Conferences sponsorship and BRNS funding to Academia

Engineering

Electronics

Bio-technology

Agriculture

Medical Technology

Bhabha Atomic Research Centre, Mumbai

DAE is actively supporting the state of the art technology in diverse areas such as Bio-science, Chemistry, Laser and plasma, High purity filtration and desalination of water, soil testing and information technology to name a few.

Nuclear Technology: The Peak of Knowledge Pyramid

- Harnessing the power of Atom requires know-how for material science, process, electronics, computation, remote handling & robotics technology.
- DAE has multiple units all over India where groups are dedicated to achieve excellence in each of these areas.
- Innovation and improvement is a continuous process in DAE.

DAE Technologies for Environment

- Spin-off technologies from multiple disciplines have been developed and transferred to industry.
- Here, technology development is, though indigenous, is pragmatic. While reinventing of the wheel is certainly avoided, the know-how is always nurtured and cherished in DAE.

Brackish Water RO Plants in Villages for Producing Drinking Water

Sheelgaon village, Barmer, Rajasthan

Satlana village, Jodhpur, Rajasthan

Technologies for Remote Rural Areas without Power Supply

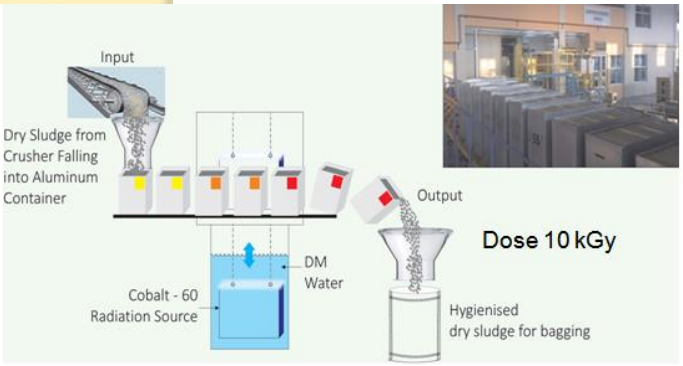
Solar PV Based BWRO Plants (200 lph capacity)

Once-through
(20% Recovery)

Re-circulation
(70 -80% Recovery)

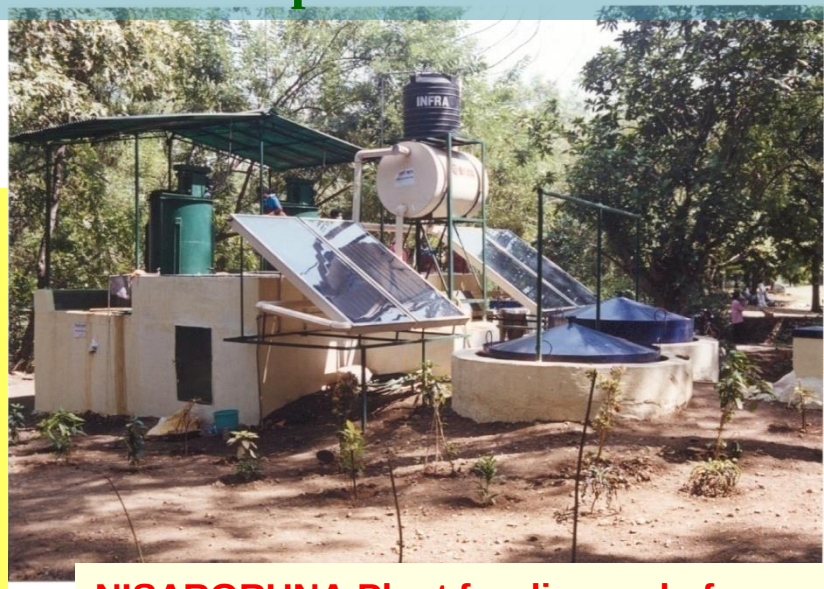
Bi-cycle mounted RO

URBAN AND RURAL WASTE RECYCLE



Gamma Radiation Treatment Process of Dry Sludge

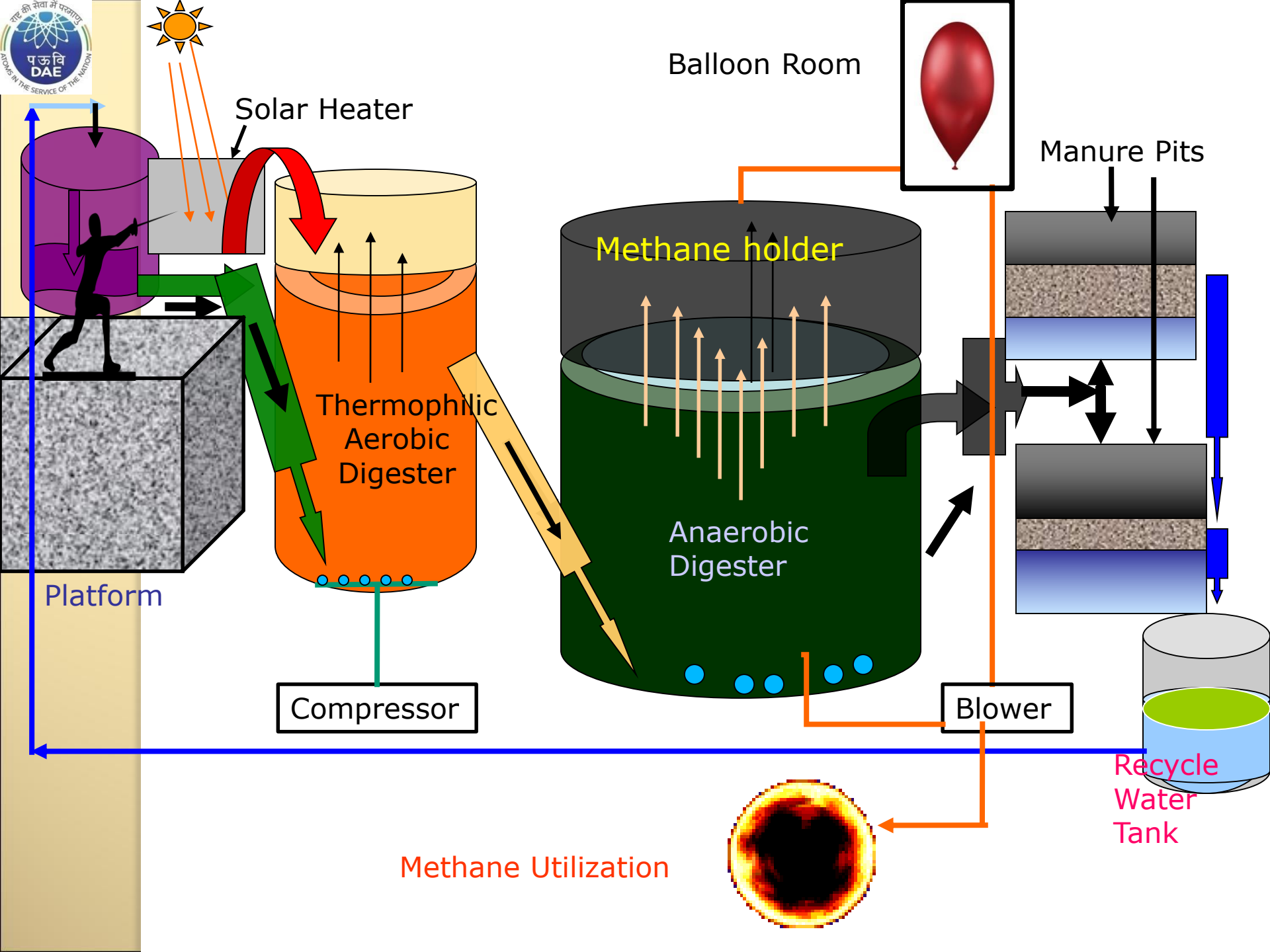
- In the year 2004, 100 tonnes of pathogen free manure was produced.
- Sludge has been tested as manure in agriculture fields
- More plants can be set up



NISARGRUNA Plant for disposal of Biodegradable wastes

- This 5 tonnes/day plant can process any biodegradable waste (Kitchen, Vegetable market, Agricultural residue, Abattoir waste) and produce high quality methane & manure (about 10% of the total waste processed).
- 100 plants made operational. Several in pipeline.

THE ABOVE TWO TECHNOLOGIES TOGETHER HAVE THE SIGNIFICANT POTENTIAL FOR ECO-FRIENDLY WASTE RECYCLE IN URBAN AND RURAL AREAS WITH PRODUCTION OF MANURE AND GENERATION OF ENERGY


Balloon Room
Solar Heater
Manure Pits
Methane holder
Thermophilic
Aerobic
Digester
Anaerobic
Digester
Platform
Compressor
Blower
Recycle
Water
Tank
Methane Utilization

Stages of coconut leaf composting at Kurla Kamgar Nagar CHS, Mumbai

Housing Society Awarded for Environmental Friendly Technology

BARC Technology Awarded

Technology should Reach the Needy

- Domestic industry can upgrade its range of products through technology transfer from BARC and/ or through incubation of new technologies.

DAE-State Govt.- Industry as Stepping Stone for Future

- Communicate to local industry about the applications of research for incubation for commercialization.
- Identification of potential entrepreneurs for spin off technologies and providing them necessary theoretical/ laboratory support.
- Create educational project work based on spin-off technologies for making course work interesting. Innovate appropriately to make the technology relevant in local context.

State Government Organisations-DAE collaboration for Facilitating Technology Transfer

- The Organisation not only gets recognition as technology facilitator, attracting interest from the industry in India and abroad, it is also seen as a natural ally for R&D by DAE for future missions.
- A nominal technology transfer fee (which ranges from few thousands to 4-5 lacs maximum for most of the technologies), is all a company needs to contribute to learn, manufacture and sell these sophisticated products developed by a team of renowned experts.

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- www.barc.gov.in/technologies/technology.html
- Visit ‘Entrepreneur Corner’ from BARC home page for complete details.